Journal of Neurosurgery

July 1991, Volume 75, Number 1

SPECIAL ARTICLES:

Electrothrombosis of saccular aneurysms via endovascular approach. Part 1: Electrochemical basis, technique, and experimental results. GUIDO GUGLIELMI, FERNANDO VIÑUELA, IVAN SEPETKA, and VELIO MACELLARI 1

Electrothrombosis of saccular aneurysms via endovascular approach. Part 2: Preliminary clinical experience. GUIDO GUGLIELMI, FERNANDO VIÑUELA, JACQUES DION, and GARY DUCKWILER 8

REVIEW ARTICLE:

Review of the secondary injury theory of acute spinal cord trauma with emphasis on vascular mechanisms. CHARLES H. TATOR and MICHAEL G. FEHLINGS 15

CLINICAL ARTICLES:

Cardiac performance indices during hypervolemic therapy for cerebral vasospasm. MICHAEL LEVY and STEVEN GIANNOTTA 27

Cavernous malformations of the brain stem. RICHARD S. ZIMMERMAN, ROBERT F. SPETZLER, K. STUART LEE, JOSEPH M. ZABRAMSKI, and RONALD W. HARGRAVES 32

Stereotactic craniotomy in the resection of small arteriovenous malformations. MICHAEL B. SISTI, ROBERT A. SOLOMON, and BENNETT M. STEIN 40

Stereotactic management of colloid cysts: factors predicting success. DOUGLAS KONDZIOLKA and L. DADE LUNSFORD 45

Screening for unruptured asymptomatic intracranial aneurysms in patients undergoing coronary angiography. KINZO IWATA, NORIO MISU, KOUICHI TERADA, SADAMI KAWAI, MOTOICHI MOMOSE, and HIROSHI NAKAGAWA 52

Relationship between the timing of aneurysm surgery and the development of delayed cerebral ischemia. ROBERT A. SOLOMON, STEPHEN T. ONESTI, and LOUISE KLEBANOFF 56

Postoperative deficits and functional recovery following removal of tumors involving the dominant hemisphere supplementary motor area. ROBERT C. ROSTOMILY, MITCHEL S. BERGER, GEORGE A. OJEMANN, and ETTORE LETTICH 62

Benign arterial dissections of the posterior circulation. EUGENIO POZZATI, ROBERTO PADOVANI, ANTHONY FABRIZI, LUCIANO SABATTINI, and GIULIO GAIST 69

Primary angiosarcoma of the central nervous system. Study of eight cases and review of the literature. HERNANDO MENA, JORGE L. RIBAS, FRANZ M. ENZINGER, and JOSEPH E. PARISI 73

Carpal tunnel syndrome: surgical treatment using the Paine retinaculatome. DAVID M. PAGNANELLI and STEVEN J. BARRER . 77

LABORATORY INVESTIGATIONS:

Altered reactivity of hemolysate-treated cultured smooth-muscle cells from rabbit basilar artery determined by digital imaging microscopy. YOSHIHIRO TAKANASHI, KAZUHIKO FUJITSU, SATOSHI FUJII, and TAKEO KUWABARA 82

The use of visible light-curing resin for vertebral body replacement. RICARDO SEGAL, MOUFID ALSAWAF, ALI TABATABAI, REISUKE SAITO, EDUARDO D. SEGAL, and ROBERT MCKINSTRY 91

Transforming growth factor-α, epidermal growth factor receptor, and proliferating potential in benign and malignant gliomas. MOTOHIKO MARUNO, JOHN S. KOVACH, PATRICK J. KELLY, and TAKEHIKO YANAGIHARA 97

Differences in critical cerebral blood flow with age in swine. JUN HARADA, AKIRA TAKAKU, SHUNRO ENDO, NAOYA KUWAYAMA, and OSAMU FUKUDA 103

Somatosensory evoked potentials in intracranial hypertension: analysis of the effects of hypoxia. PAUL R. ELDRIDGE, D. TERENCE HOPE, PATRICK M. YEOMAN, IAIN K. FARQUHAR, MICHAEL MITCHELL, SHARON A. CLARKE, and N. JOLLYON SMITH 108

CASE REPORTS AND TECHNICAL NOTES:

Intracranial neurenteric cysts. Report of two cases. GEORGE MALCOLM, LINDSAY SYMON, BRIAN KENDALL, and MANUEL PIRES 115

Coexistent hemangioblastoma and arteriovenous malformation of the cerebellum. Case report. YURI A. MEDVEDEV, DMITRI E. MATSKO, YURI N. ZUBKOV, VYACHESLAV A. PAK, and LON F. ALEXANDER 121

Deformity correction and long-term survival in an infant with iniencephaly. Case report. JOHN J. GARTMAN, THOMAS E. MELIN, W. THOMAS LAWRENCE, and STEPHEN K. POWERS 126

Isolated symptomatic cervical spinous process fracture requiring surgery. Case report. LEONARD F. HIRSH, LUIS E. DUARTE, ERIC H. WOLFSON, and WILHELM GERHARD 131

Hemifacial spasm in an infant due to fourth ventricular ganglioglioma. Case report. DOUGLAS C. BILLS and AHMED HANIEH 134

Malignant transformation of an osteoblastoma of the skull: an exceptional occurrence. Case report. DOMINIQUE FIGARELLA-BRANGER, MIGUELINA PEREZ-CASTILLO, LOUISE GARBE, FRANÇOIS GRISOLI, DANIELLE GAMBARELLI, and JACQUES HASSOUN 138

Recurrent spinal cord tethering by sacral nerve root following lipomyelomeningocele surgery. Case report. GIANCARLO BAROLAT, DALE SCHAEFER, and SERGIO ZEME 143

Retrograde suction decompression of an ophthalmic artery aneurysm using balloon occlusion. Technical note. JOHN A. SCOTT, TERRY G. HORNER, and THOMAS J. LEIPZIG 146

Studies on coagulation and the development of an automatic computerized bipolar coagulator. Technical note. BJÖRN BERG-DAHL and BERTIL VÄLLFORS 148

Index for optimum ventricular catheter length. Technical note. SEMIH I. KESKİL, NECDET ÇEVİKER, KEMALI BAYKANER, and HIZIR ALP 152

HISTORICAL VIGNETTES:

Paul Broca and the first craniotomy based on cerebral localization. JAMES L. STONE 154

The Johns Hopkins Hospital. DONLIN M. LONG 160

BOOK REVIEWS 162

NEUROSURGICAL FORUM: Letters to the editor 166

NOTICES 173

Journal of Neurosurgery

August 1991, Volume 75, Number 2

CLINICAL ARTICLES:

The influence of volume on the tolerance of the brain to radiosurgery. LAWRENCE B. MARKS and DAVID P. SPENCER . . 177

Intracisternal recombinant tissue plasminogen activator after aneurysmal subarachnoid hemorrhage. J. MAX FINDLAY, BRYCE K. A. WEIR, NEAL F. KASSELL, LEW B. DISNEY, and MICHAEL G. A. GRACE 181

Phase I trial of tissue plasminogen activator for the prevention of vasospasm in patients with aneurysmal subarachnoid hemorrhage. JOSEPH M. ZABRAMSKI, ROBERT F. SPETZLER, K. STUART LEE, STEPHEN M. PAPADOPOULOS, EDWIN BOVILL, RICHARD S. ZIMMERMAN, and JOSHUA B. BEDERSON 189

Effect of intrathecal fibrinolytic therapy on clot lysis and vasospasm in patients with aneurysmal subarachnoid hemorrhage. JUHA ÖHMAN, ANTTI SERVO, and OLLI HEISKANEN 197

Histological grading and bromodeoxyuridine labeling index of astrocytomas. Comparative study in a series of 60 cases. FRANÇOIS LABROUSSE, CATHERINE DAUMAS-DUPORT, LESZEK BATORSKI, and TAKAO HOSHINO 202

The nature of congenital posterior cervical or cervicothoracic midline cutaneous mass lesions. Report of eight cases. PAUL STEINBOK and D. DOUGLAS COCHRANE 206

Evaluation and treatment of atlas burst fractures (Jefferson fractures). LEE KESTERSON, EDWARD BENZEL, WILLIAM ORRISON, and JAMES COLEMAN 213

Magnetic resonance imaging of the transverse atlantal ligament for the evaluation of atlantoaxial instability. CURTIS A. DICKMAN, ALEXANDER MAMOURIAN, VOLKER K. H. SONNTAG, and BURTON P. DRAYER 221

Endovascular treatment of intracerebral arteriovenous malformations: experience in 49 cases. DOMINIQUE FOURNIER, KAREL G. TERBRUGGE, ROBERT WILLINSKY, PIERRE LASJAUNIAS, and WALTER MONTANERA 228

Grafting of perfused adrenal medullary tissue into the caudate nucleus of patients with Parkinson's disease. JUAN J. LÓPEZ-LOZANO, GONZALO BRAVO, JAVIER ABASCAL, and THE CLINICA PUERTA DE HIERRO NEURAL TRANSPLANTATION GROUP 234

Diagnostic relevance of trigeminal evoked potentials following infraorbital nerve stimulation. MASSIMO LEANDRI and EMILIO FAVALE 244

Prediction tree for severely head-injured patients. SUNG C. CHOI, JAN P. MUIZELAAR, THOMAS Y. BARNES, ANTHONY MARMAROU, DANNY M. BROOKS, and HAROLD F. YOUNG 251

Head-injured patients who talk and deteriorate into coma. Analysis of 211 cases studied with computerized tomography. RAMIRO D. LOBATO, JUAN J. RIVAS, PEDRO A. GOMEZ, MARIO CASTAÑEDA, JOSÉ M. CAÑIZAL, ROSARIO SARABIA, ANTONIO CABRERA, and MARIA J. MUÑOZ 256

Supratentorial dermoid cysts. PIERPAOLO LUNARDI and PAOLO MISSORI 262

LABORATORY INVESTIGATIONS:

Possible roles of basic fibroblast growth factor in the pathogenesis of moyamoya disease: an immunohistochemical study. MINORU HOSHIMARU, JUN A. TAKAHASHI, HARUHIKO KIKUCHI, IZUMI NAGATA, and MASAKAZU HATANAKA . . 267

Application of the 1-μsec pulsed-dye laser to the treatment of experimental cerebral vasospasm. ATSUSHI TERAMURA, ROBERT MACFARLANE, CHRISTOPHER J. OWEN, RALPH DE LA TORRE, KENTON W. GREGORY, REGINALD BIRNGRUBER, JOHN A. PARRISH, JOHN W. PETERSON, and NICHOLAS T. ZERVAS 271

Cross-resistance patterns in ACNU-resistant glioma sublines in culture. YUJI SAITO, YOSIHIRO NAKADA, TAKUHIRO HOTTA, TAKASI MIKAMI, KAORU KURISU, KENJI YAMADA, KATUZOU KIYA, KEIICHI KAWAMOTO, and TOHRU UOZUMI 277

Response of low-passage human malignant gliomas *in vitro* to stimulation and selective inhibition of growth factor-mediated pathways. IAN F. POLLACK, MARGARET S. RANDALL, MATTHEW P. KRISTOFIK, ROBERT H. KELLY, ROBERT G. SELKER, and FRANK T. VERTOSICK, JR. 284

Dorello's canal: a microanatomical study. FELIX UMANSKY, JOSEF ELIDAN, and ALBERTO VALAREZO 294

Microvascular anatomy of foramen caecum medullae oblongatae. ASIM MAHMOOD, MANUEL DUJOVNY, MAXIMO TORCHE, LJUBISA DRAGOVIC, and JAMES I. AUSMAN 299

CASE REPORTS AND TECHNICAL NOTES:

Clipping of an aneurysm 20 years after encasement with methyl methacrylate. Case report. CHRISTOPHER S. OGILVY and CHARLES E. POLETTI 305

Coronary vasospasm following subarachnoid hemorrhage as a cause of stunned myocardium. Case report. KIYOSHI YUKI, YASUNORI KODAMA, JUN ONDA, KATSUYA EMOTO, TADAO MORIMOTO, and TOHRU UOZUMI 308

Spinal intramedullary ependymal cyst. Report of three cases. DANIEL P. ROBERTSON, JOEL B. KIRKPATRICK, RICHARD L. HARPER, and MICHEL E. MAWAD 312

Cervicomedullary junction decompression in a case of Marshall-Smith syndrome. Case report. CONRAD T. E. PAPPAS and HAROLD L. REKATE 317

Cervical paraganglioma with subsequent intracranial and intraspinal metastases. Case report. DEBORAH A. BLADES, RUSSELL W. HARDY, and MARK COHEN 320

Symptomatic xanthogranuloma of choroid plexus with unilateral hydrocephalus. Case report. WOLFGANG BRÜCK, ULRICH SANDER, PETER BLANCKENBERG, and REINHARD L. FRIEDE 324

Resin sealant: a new method of methyl methacrylate cranioplasty. Technical note. AKIRA YANAI 328

Identification of the proximal neck of giant paraclinoidal aneurysms. Technical note. TOSHIO MIKABE, SHIN TOMITA, SABURO WATANABE, SHIGERU OYA, MASAHITO YUZURIHARA, and HIDETOSHI MOCHIDA 331

BOOK REVIEWS 333

NEUROSURGICAL FORUM: Letters to the editor 337

NOTICES 343

Journal of Neurosurgery

September 1991, Volume 75, Number 3

FRANK H. MAYFIELD, M.D., 1908–1991. JOHN M. TEW 347

CLINICAL ARTICLES:

Lateral parascapular extrapleural approach to the upper thoracic spine. RICHARD G. FESSLER, DONALD D. DIETZE, JR., MICHAEL MAC MILLAN, and DAVID PEACE 349

Intracranial aneurysms in sickle-cell anemia: clinical features and pathogenesis. NELSON M. OYESIKU, DANIEL L. BARROW, JAMES R. ECKMAN, SUZIE C. TINDALL, and AUSTIN R. T. COLOHAN 356

Surgical treatment of limbic epilepsy associated with extrahippocampal lesions: the problem of dual pathology. MICHEL F. LÉVESQUE, NOBUKAZU NAKASATO, HARRY V. VINTERS, and THOMAS L. BABB 364

Unruptured intracranial aneurysms: seizures and antiepileptic drug treatment following surgery. ADRIAN L. RABINOWICZ, DAVID L. GINSBURG, CHRISTOPHER M. DEGIORGIO, PEGGY S. GOTT, and STEVEN L. GIANNOTTA 371

Retrospective long-term follow-up analysis in 21 patients with chordomas of various sites treated at a single institution. MARTIN E. KEISCH, DELIA M. GARCIA, and ROBERT B. SHIBUYA 374

The relationship between intelligence and memory following minor or mild closed head injury: greater impairment in memory than intelligence. STUART HALL and ROBERT A. BORNSTEIN 378

Texas Scottish Rite Hospital rod instrumentation for thoracic and lumbar spine trauma. EDWARD C. BENZEL, LEE KESTERSON, and ERICH P. MARCHAND 382

Microvascular decompression for hemifacial spasm. Patterns of vascular compression in unsuccessfully operated patients. SHINJI NAGAHIRO, AKIRA TAKADA, YASUHIKO MATSUKADO, and YUKITAKA USHIO 388

Optochiasmal arachnoiditis following muslin wrapping of ruptured anterior communicating artery aneurysms. ROBERT M. MCFADZEAN, DONALD M. HADLEY, and GAWN G. MCILWAINE 393

Efficacy of dorsal longitudinal myelotomy in treating spinal spasticity: a review of 20 cases. TIMOTHY K. PUTTY and SCOTT A. SHAPIRO 397

Treatment of chronic pain by epidural spinal cord stimulation: a 10-year experience. KRISHNA KUMAR, RAHUL NATH, and GORDON M. WYANT 402

LABORATORY INVESTIGATIONS:

Suppression by traumatic brain injury of spontaneous hemodynamic recovery from hemorrhagic shock in rats. X. Q. YUAN, CHARLES E. WADE, and CHARLES B. CLIFFORD 408

Etiology of cerebral vasospasm in primates. R. LOCH MACDONALD, BRYCE K. A. WEIR, TIM D. RUNZER, MICHAEL G. A. GRACE, J. MAX FINDLAY, KENICHI SAITO, DAVID A. COOK, BRUCE W. MIELKE, and KENJI KANAMARU 415

Surgical manipulation of primate cerebral arteries in established vasospasm. J. MAX FINDLAY, R. LOCH MACDONALD, BRYCE K. A. WEIR, and MICHAEL G. A. GRACE 425

Effects of hypothermia and hyperthermia on the reactivity of rat intracerebral arterioles *in vitro*. KOICHIRO OGURA, MASAKAZU TAKAYASU, and RALPH G. DACEY, JR. 433

Electrophysiological studies of various graft lengths and lesion lengths in repair of nerve gaps in primates. DANIEL H. KIM, SEÁN E. CONNOLLY, JOSEPH T. GILLESPIE, RAND M. VOORHIES, and DAVID G. KLINE 440

Expression of platelet-derived growth factor and transforming growth factor and their correlation with cellular morphology in glial tumors. TIMOTHY B. MAPSTONE 447

Induction of cytosolic free calcium elevation in rat vascular smooth-muscle cells by cerebrospinal fluid from patients after subarachnoid hemorrhage. KATSUNOBU TAKENAKA, HIROMU YAMADA, NOBORU SAKAI, TAKASHI ANDO, TOSHIHIKO NAKASHIMA, and YASUAKI NISHIMURA 452

CASE REPORTS AND TECHNICAL NOTES:

Cerebral amyloid angiopathy presenting as multiple intracranial lesions on magnetic resonance imaging. Case report. DEEPAK AWASTHI, RAND M. VOORHIES, JOHN EICK, and WILLIAM T. MITCHELL 458

Excision of cavernous angioma with preservation of coexisting venous angioma. Case report. OSAMU SASAKI, RYUICHI TANAKA, TETSUO KOIKE, AKIRA KOIDE, TAKAYUKI KOIZUMI, and HIROSHI OGAWA 461

Anomalous rib presenting as cervical myelopathy: a previously unreported variant of Klippel-Feil syndrome. Case report. JACK P. ROCK and ERIC M. SPICKLER 465

Primary embryonal-cell carcinoma of the parietal lobe. Case report. ROBIN F. KOELEVELD and ALAN R. COHEN 468

Cerebral sparganosis caused by *Spirometra mansonoides*. Case report. ARTURO LANDERO, FORTINO HERNANDEZ, MARIO A. ABASOLO, D. ANTONIO RECHY, and PATRICIA NUÑEZ 472

Traumatic pericallosal aneurysm in a patient with no major trauma. Case report. MORIS SENEGOR 475

Stabilization of traumatic atlanto-occipital dislocation. Case report. ALLAN J. BELZBERG and BRUCE I. TRANMER 478

Transoral transclival clipping of anterior inferior cerebellar artery aneurysm using new rotating applier. Technical note. H. ALAN CROCKARD, TURGUT KOKSEL, and NIGEL WATKIN 483

Stereotactic suboccipital transcerebellar biopsy under local anesthesia using the Cosman-Roberts-Wells frame. Technical note. ROBERTO SPIEGELMANN and WILLIAM A. FRIEDMAN 486

HISTORICAL VIGNETTE: **The Sterling Hall of Medicine, Yale University School of Medicine.** WILLIAM F. COLLINS ... 489

BOOK REVIEWS 491

NEUROSURGICAL FORUM: **Letters to the editor** 494

NOTICES 500

Journal of Neurosurgery

October 1991, Volume 75, Number 4

CLINICAL ARTICLES:

Geniculate neuralgia: the surgical management of primary otalgia. VEDANTAM RUPA, RICHARD L. SAUNDERS, and DUDLEY J. WEIDER 505

Stereotactic radiosurgery for arteriovenous malformations of the brain. L. DADE LUNSFORD, DOUGLAS KONDZIOLKA, JOHN C. FLICKINGER, DAVID J. BISSONETTE, CHARLES A. JUNGREIS, ANN H. MAITZ, JOSEPH A. HORTON, and ROBERT J. COFFEY 512

Aneurysms of the intracavernous carotid artery: a multidisciplinary approach to treatment. MARK E. LINSKEY, LALIGAM N. SEKHAR, JOSEPH A. HORTON, WILLIAM L. HIRSCH, JR., and HOWARD YONAS 525

Determination of cerebrospinal fluid shunt obstruction with magnetic resonance phase imaging. JAMES M. DRAKE, ALASTAIR J. MARTIN, and R. MARK HENKLEMAN 535

Ventricular cerebrospinal fluid eosinophilia in children with ventriculoperitoneal shunts. HOWARD TUNG, COREY RAFFEL, and J. GORDON MCCOMB 541

Hyperglycemia and neurological outcome in patients with head injury. ARTHUR M. LAM, H. RICHARD WINN, BRUCE F. CULLEN, and NANCY SUNDLING 545

Subarachnoid hemorrhage in sickle-cell disease. JOHN A. ANSON, MABEL KOSHY, LAWRENCE FERGUSON, and ROBERT M. CROWELL 552

Malignant astrocytomas: focal tumor recurrence after focal external beam radiation therapy. BERTRAND C. LIANG, ALLAN F. THORNTON, JR., HOWARD M. SANDLER, and HARRY S. GREENBERG 559

Radiation-induced meningiomas: experience at the Mount Sinai Hospital and review of the literature. MICHAEL J. HARRISON, DAVID E. WOLFE, TAI-SHING LAU, ROBIN J. MITNICK, and VED P. SACHDEV 564

Medulloblastoma: freedom from relapse longer than 8 years—a therapeutic cure? MARK G. BELZA, SARAH S. DONALDSON, GARY K. STEINBERG, RICHARD S. COX, and PHILIP H. COGEN 575

Symptomatic subependymoma: a clinicopathological and flow cytometric study. DANIELA LOMBARDI, BERND W. SCHEITHAUER, FREDRIC B. MEYER, GLENN S. FORBES, EDWARD G. SHAW, DONNA J. GIBNEY, and JERRY A. KATZMANN 583

"Angioglioma" and the arteriovenous malformation-glioma association. DANIELA LOMBARDI, BERND W. SCHEITHAUER, DAVID PIEPGRAS, FREDRIC B. MEYER, and GLENN S. FORBES 589

LABORATORY INVESTIGATIONS:

Effects of recombinant human tumor necrosis factor on rodent gliomas and normal brain. JÜRGEN C. W. KIWIT, KARL-HEINZ SCHMITZ, LUDWIG DAUM, GUIDO REIFENBERGER, and NORBERT ROOSEN 597

Induction of transformational changes in normal endothelial cells by cultured human astrocytoma cells. DANIEL L. SILBERGELD, FRANCIS ALI-OSMAN, and H. RICHARD WINN 604

Treatment of vasospasm with a 480-nm pulsed-dye laser. ROBERT MACFARLANE, ATSUSHI TERAMURA, CHRISTOPHER J. OWEN, SCOTT CHASE, RALPH DE LA TORRE, KENTON W. GREGORY, JOHN W. PETERSON, REGINALD BIRNGRUBER, JOHN A. PARRISH, and NICHOLAS T. ZERVAS 613

Reduction of central nervous system ischemic injury by monoclonal antibody to intercellular adhesion molecule. WAYNE M. CLARK, KEN P. MADDEN, ROBERT ROTHLEIN, and JUSTIN A. ZIVIN 623

CASE REPORTS AND TECHNICAL NOTE:

Spontaneous dissecting aneurysms of the basilar artery presenting with a subarachnoid hemorrhage. Report of two cases. KOHKICHI HOSODA, SHIGEKIYO FUJITA, TETSURO KAWAGUCHI, YOSHITERU SHOSE, KAZUKI YONEZAWA, TAKAYUKI SHIRAKUNI, and MASATAKE HAMASAKI 628

Curative treatment of scalp arteriovenous fistulas by direct puncture and embolization with absolute alcohol. Report of three cases. GUILHERME S. MOURAO, JONATHAN E. HODES, Y. PIERRE GOBIN, ALFREDO CASASCO, ARMAND AYMARD, and JEAN JACQUES MERLAND 634

Sixth nerve schwannomas. Report of two cases. HOWARD TUNG, THOMAS CHEN, and MARTIN H. WEISS 638

Gliofibroma. Case report. G. JACKSON SNIPES, GARY K. STEINBERG, BARTON LANE, and DIKRAN S. HOROUPIAN 642

Successful excision of a juvenile-type spinal arteriovenous malformation following intraoperative embolization. Case report. HAJIME TOUHO, JUN KARASAWA, HISASHI SHISHIDO, KEISUKE YAMADA, and KEIJI SHIBAMOTO 647

Sciatic nerve entrapment in a child. Case report. NAGAGOPAL VENNA, MARTIN BIELAWSKI, and EDWARD M. SPATZ 652

Embolization of arteriovenous malformations with peripheral aneurysms using ethylene vinyl alcohol copolymer. Report of three cases. TOMOAKI TERADA, YOSHINARI NAKAMURA, KUNIO NAKAI, MITSUHARU TSUURA, TAKASHI NISHIGUCHI, SEIJI HAYASHI, TAKUHEI KIDO, WARO TAKI, HIROO IWATA, and NORIHIKO KOMAI 655

The use of an intraluminal shunt for bypass grafts of the cavernous internal carotid artery. Technical note. TOMOKATSU HORI, EISHI IKAWA, ATSUMI TAKENOBU, YUICHI ANNO, SEIJIRO TANIURA, TAKASHI WATANABE, and YOSHIYUKI UEDA 661

BOOK REVIEWS 664

NEUROSURGICAL FORUM: Letters to the editor 667

NOTICES 673

Journal of Neurosurgery

November 1991, Volume 75, Number 5

AANS Presidential Address, 1991: Now is our time. DAVID L. KELLY, JR. 677

Clinical Articles:

Cerebral circulation and metabolism after severe traumatic brain injury: the elusive role of ischemia. GERRIT J. BOUMA, J. PAUL MUIZELAAR, SUNG C. CHOI, PAULINE G. NEWLON, and HAROLD F. YOUNG 685

Endovascular occlusion of intracranial vessels for curative treatment of unclippable aneurysms: report of 16 cases. JONATHAN E. HODES, ARMAND AYMARD, Y. PIERRE GOBIN, DANIEL RÜFENACHT, SIEGFRIED BIEN, DANIEL REIZINE, ANDRÉ GASTON, and JEAN JACQUES MERLAND 694

An analysis of the natural history of cavernous angiomas. O. DEL CURLING, JR., DAVID L. KELLY, JR., ALLEN D. ELSTER, and TIMOTHY E. CRAVEN 702

Natural history of the cavernous angioma. JOHN R. ROBINSON, ISSAM A. AWAD, and JOHN R. LITTLE 709

The natural history of intracranial venous angiomas. TIMOTHY B. GARNER, O. DEL CURLING, JR., DAVID L. KELLY, JR., and D. WAYNE LASTER 715

Stereotactic ventrolateralis thalamotomy for medically refractory tremor in post-levodopa era Parkinson's disease patients. MARK W. FOX, J. ERIC AHLSKOG, and PATRICK J. KELLY 723

Adverse effects of prolonged hyperventilation in patients with severe head injury: a randomized clinical trial. J. PAUL MUIZELAAR, ANTHONY MARMAROU, JOHN D. WARD, HERMES A. KONTOS, SUNG C. CHOI, DONALD P. BECKER, HANS GRUEMER, and HAROLD F. YOUNG 731

Long-term outcome of 89 low-grade brain-stem gliomas after interstitial radiation therapy. FRITZ MUNDINGER, DIETER F. BRAUS, JOACHIM K. KRAUSS, and WALTER BIRG 740

Stereotactic rostral mesencephalotomy in cancer pain and deafferentation pain. A series of 40 cases with follow-up results. D. ANDRIES BOSCH 747

Cerebral vasospasm evaluated by transcranial Doppler ultrasonography at different intracranial pressures. JÜRGEN KLINGELHÖFER, DIRK SANDER, MANFRED HOLZGRAEFE, CHRISTIAN BISCHOFF, and BASTIAN CONRAD 752

Predicting recovery of facial nerve function following injury from a basilar skull fracture. ANDREW B. ADEGBITE, MOE I. KHAN, and L. TAN 759

A comparison of computerized tomography-guided stereotactic and ultrasound-guided techniques for brain biopsy. NICOLA DI LORENZO, VINCENZO ESPOSITO, PIERPAOLO LUNARDI, ROBERTO DELFINI, ALDO FORTUNA, and GIAMPAOLO CANTORE 763

Laboratory Investigations:

Impairment of helper T-cell function and lymphokine-activated killer cytotoxicity following severe head injury. KEITH B. QUATTROCCHI, EDMUND H. FRANK, CLARAMAE H. MILLER, ASIM AMIN, BERNARDO W. ISSEL, and FRANKLIN C. WAGNER, JR. 766

Restoration of cerebrovascular responsiveness to hyperventilation by the oxygen radical scavenger n-acetylcysteine following experimental traumatic brain injury. EARL F. ELLIS, LYN Y. DODSON, and RICHARD J. POLICE 774

Case Reports and Technical Note:

Rapid growth of residual aneurysmal neck during pregnancy. Case report. BRYCE K. A. WEIR and CHARLES G. DRAKE 780

Trigeminal neuralgia caused by compression from arteries transfixing the nerve. Report of three cases. HARUHIKO TASHIRO, AKINORI KONDO, IKUHIRO AOYAMA, KIYOSHI NIN, KATSUMI SHIMOTAKE, TATSUYA NISHIOKA, YOSHIAKI IKAI, and JUN TAKAHASHI 783

Elevated intracranial pressure from cerebral venous obstruction by Masson's vegetant intravascular hemangioendothelioma. Case report. DENNIS Y. WEN, DAVID R. HARDTEN, JONATHAN D. WIRTSCHAFTER, JOO HO SUNG, and STEPHEN J. HAINES 787

Chiari malformation with syringocephaly. Case report. ERIC L. RHOTON and ALBERT L. RHOTON, JR. 791

Neuromuscular hamartoma (benign "triton" tumor) of the brachial plexus. Case report. DEEPAK AWASTHI, DAVID G. KLINE, and EDWIN N. BECKMAN 795

Compulsive polydipsia following meningioma resection: an epileptic phenomenon? Case report. ADRIAN L. RABINOWICZ, MARTIN H. WEISS, and CHRISTOPHER M. DEGIORGIO 798

Monostotic fibrous dysplasia of the clivus. Case report. MICHAEL L. LEVY, THOMAS C. CHEN, and MARTIN H. WEISS 800

Dorsal selective rhizotomy through a limited exposure of the cauda equina at L-1. Technical note. GIANCARLO BAROLAT 804

Historical Vignettes:

The image of the "brain surgeon" in American culture: the influence of Harvey Cushing. SAMUEL H. GREENBLATT 808

Origins of Wilder Penfield's surgical technique. The role of the "Cushing ritual" and influences from the European experience. MARK C. PREUL and WILLIAM FEINDEL 812

The Montreal Neurological Institute. WILLIAM FEINDEL 821

Chiari's description of cerebellar ectopy (1891). With a summary of Cleland's and Arnold's contributions and some early observations on neural-tube defects. P. J. KOEHLER 823

Book Reviews 827

Neurosurgical Forum: Letters to the editor 830

Notices 842

Journal of Neurosurgery

December 1991, Volume 75, Number 6

REVIEW ARTICLE: **The role of neuroeffector mechanisms in cerebral hyperperfusion syndromes.** ROBERT MACFARLANE, MICHAEL A. MOSKOWITZ, DANOS E. SAKAS, EROL TASDEMIROGLU, ENOCH P. WEI, and HERMES A. KONTOS 845

CLINICAL ARTICLES:

Combined endovascular embolization and surgery in the management of cerebral arteriovenous malformations: experience with 101 cases. FERNANDO VIÑUELA, JACQUES E. DION, GARY DUCKWILER, NEIL A. MARTIN, PEDRO LYLYK, ALLAN FOX, DAVID PELZ, CHARLES G. DRAKE, JOHN J. GIRVIN, and GERARD DEBRUN 856

Stereotactic third ventriculostomy in patients with nontumoral adolescent/adult onset aqueductal stenosis and symptomatic hydrocephalus. PATRICK J. KELLY 865

A clinicopathological study of dissecting aneurysms of the intracranial vertebral artery. OSAMU SASAKI, HIROSHI OGAWA, TETSUO KOIKE, TAKAYUKI KOIZUMI, and RYUICHI TANAKA 874

Operative management of bilateral facet dislocation. AIZIK WOLF, LION LEVI, STUART MIRVIS, JOHN RAGHEB, STEPHEN HUHN, DANIELE RIGAMONTI, and WALKER L. ROBINSON 883

Disabling cerebral transient ischemic attacks. PATRICK W. MCCORMICK, FRANK J. TOMECEK, JEAN MCKINNEY, and JAMES I. AUSMAN 891

Morphological study of clinically nonsecreting pituitary adenomas in patients under 40 years of age. SHOZO YAMADA, KALMAN KOVACS, EVA HORVATH, and TADASHI AIBA 902

LABORATORY INVESTIGATIONS:

Effect of chemical sympathectomy on cerebral blood flow in rats. HIDENORI KOBAYASHI, MINORU HAYASHI, HIROKAZU KAWANO, YUJI HANDA, MASANORI KABUTO, and HISASHI IDE 906

Histopathology of experimental hematomyelia. THOMAS H. MILHORAT, DAVID E. ADLER, IAN M. HEGER, JOHN I. MILLER, and JOANNA R. HOLLENBERG-SHER 911

The effect of age on outcome following traumatic brain injury in rats. ROBERT J. HAMM, LARRY W. JENKINS, BRUCE G. LYETH, DAPHNE M. WHITE-GBADEBO, and RONALD L. HAYES 916

Expression and modulation of major histocompatibility antigens on murine primary brain tumor *in vitro*. AYTAC AKBASAK, EDWARD H. OLDFIELD, and STEPHEN C. SARIS 922

Hypersensitivity of rat glioma sublines with acquired ACNU resistance to L-asparaginase. YUJI SAITO, YOSIHIRO NAKADA, TAKUHIRO HOTTA, TAKASI MIKAMI, KAORU KURISU, KATUZOU KIYA, KEIICHI KAWAMOTO, and TOHRU UOZUMI 930

Decussation of hind-limb and fore-limb fibers in the monkey corticospinal tract: relevance to cruciate paralysis. CONRAD T. E. PAPPAS, ALAN R. GIBSON, and VOLKER K. H. SONNTAG 935

Multidrug resistance gene (MDR1) expression in human brain tumors. MICHAEL W. NABORS, CONSTANCE A. GRIFFIN, BARBARA A. ZEHNBAUER, RALPH H. HRUBAN, PETER C. PHILLIPS, STUART A. GROSSMAN, HENRY BREM, and O. MICHAEL COLVIN 941

CASE REPORTS AND TECHNICAL NOTE:

A sacral dural arteriovenous fistula presenting with an intermittent myelopathy aggravated by menstruation. Case report. DONG-IK KIM, IN-SUP CHOI, and ALEX BERENSTEIN 947

Surgically verified variations in the A_1 segment of the anterior cerebral artery. Report of two cases. JOHANNES MÄURER, ELISABETH MÄURER, and AXEL PERNECZKY 950

Cervical disc herniation presenting as a mass lesion posterior to the odontoid process. Report of two cases. WILLIAM S. ROSENBERG, ANDREW E. ROSENBERG, and CHARLES E. POLETTI 954

Obstructive hydrocephalus caused by an abnormal vein in the aqueduct. Case report. AKIRA WATANABE, RYOJI ISHII, MASAKI KAMADA, YASUO SUZUKI, KAZUHIRO HIRANO, and HIRONARI OKAMURA 960

Enlargement of basilar artery aneurysms following balloon occlusion — "water-hammer effect." Report of two cases. EDDIE S. K. KWAN, CARL B. HEILMAN, WILLIAM A. SHUCART, and RICHARD P. KLUCZNIK 963

Hemorrhage into an intradiploic arachnoid cyst. Case report. ASHOK MAHADEO HANDE and ANIL PANDURANG KARAPURKAR 969

Metastatic juvenile pilocytic astrocytoma. Case report. WILLIAM G. OBANA, PHILIP H. COGEN, RICHARD L. DAVIS, and MICHAEL S. B. EDWARDS 972

Intradural extraosseous chordoma in the foramen magnum region. Case report. YOICHI KATAYAMA, TAKASHI TSUBOKAWA, TAKEHIKO HIRASAWA, TETSUYA TAKAHATA, and NORIMICHI NEMOTO 976

Extraosseous spinal chordoma. Case report. FRANCIS H. TOMLINSON, BERND W. SCHEITHAUER, GARY M. MILLER, and BURTON M. ONOFRIO 980

Anomalous subarcuate loop. Technical note. ATUL GOEL and LALIGAM N. SEKHAR 985

HISTORICAL VIGNETTE: **Peter Bent Brigham Hospital.** PETER MCL. BLACK 987

CUSHING ORATION, 1991: **Everyone is guilty in everything.** YEVGENY YEVTUSHENKO 989

BOOK REVIEWS 997

NEUROSURGICAL FORUM: **Letters to the editor** 1001

NOTICES 1004

INDEX TO VOLUME 75 1007